**DRAFT**
**DECISION DOCUMENT**
**SITE-SPECIFIC VARIANCE**

**CONOCOPHILLIPS-ALLIANCE REFINERY**
**BELLE CHASSE, LOUISIANA**
**LAD 056024391**
**AI#2418 / PER20080009**

**RECORDS CENTER COPY**

BOBBY JINDAL
GOVERNOR

HAROLD LEGGETT, PH.D.
SECRETARY

# State of Louisiana

## DEPARTMENT OF ENVIRONMENTAL QUALITY
## ENVIRONMENTAL SERVICES

Chris Chandler, Refinery Manager
ConocoPhillips-Alliance Refinery
P.O. Box 176
15551 Hwy 23 South
Belle Chase, LA 70037-0176

RE: ConocoPhillips-Alliance Refinery
AI#2418/LAD056024391/ PER20080009
Draft Decision Document for Site-Specific Variance from the Classification as a Solid Waste for Hazardous Waste Codes K171/K172 Pursuant to LAC 33:V.105.O.1.c and 105.2.c.

Dear Mr. Chandler:

The Waste Permits Division has reviewed your request for a variance from the classification as a solid waste for hazardous waste codes K171/K172 pursuant to LAC 33:V.105.O.1.c and 105.O.2.c dated April 11, 2008, at the Alliance Refinery site.

Based on the information submitted, the Waste Permits Division proposes to issue a site-specific variance to conduct hydro-processing activities within unit reactor 294-LSG operated at your facility. Attached is a copy of the proposed draft decision document for the site-specific variance and additional documentation, which will be made available during a thirty (30) day comment period. A final decision document will be prepared after the end of the public comment period.

Please reference your Agency Interest Number (2418), EPA ID Number (LAD056024391), and Permit Activity Number (PER20080009) on all future correspondence pertaining to this matter. If you have any questions, please contact Mr. Keith R. Williams of the Waste Permits Division at (225) 219-3011 or Ms. Soumaya Ghosn of the Public Participation Group at (225) 219-3276.

Sincerely,

Bijan Sharafkhani, P.E.
Administrator
Waste Permits Division

krw

Attachment

c: Chuck Handrich – Waste Permits Division
Tyler Ginn – Enforcement Division
Elliot Vega – Legal Affairs Division, Legal Section

# FACT SHEET

# FACT SHEET

## FOR THE DRAFT DECISION OF A SITE-SPECIFIC VARIANCE PREPARED FOR

## CONOCOPHILLIPS-ALLIANCE REFINERY

**EPA ID# LAD 056 024 391**
**Agency Interest # 2418**
**PER20080009**

**Belle Chasse, Louisiana**
**Plaquemines Parish**

## I. INTRODUCTION

This fact sheet has been developed in accordance with the Louisiana Administrative Code (LAC) 33:V.703.D and briefly sets forth principal and significant facts, legal, methodological and policy requirements of the proposed draft site-specific variance for ConocoPhillips-Alliance Refinery, EPA ID Number LAD 056 024 391, Agency Interest Number 2418, for the Alliance Refinery located in Belle Chasse, Plaquemines Parish, Louisiana.

ConocoPhillips-Alliance Refinery, is seeking a site-specific variance in accordance with LAC 33:V.105.O.1.c and 105.O.2.c, Variances from Classification as a Solid Waste and Standards and Criteria for Variances from Classification as a Solid Waste, respectively. The Louisiana Department of Environmental Quality (LDEQ) has been requested to grant a site-specific variance for hazardous waste codes K171 and K172 in spent catalysts generated in hydro-processing reactors at the Alliance refinery. The spent catalysts will be contained in block-like structures called CD Modules® manufactured by Catalytic Distillation Technologies (CDTECH) located in Pasadena, Texas.

ConocoPhillips-Alliance Refinery, has established a licensing agreement to use CDTECH's CD Modules® in their hydro-processing reactors (Unit 294-LSG (Low Sulfur Gasoline)) during hydro-processing catalytic activities, which include initial reclamation (deactivation) of the spent catalysts contained in the CD Modules®. CDTECH has, in turn, established a tolling agreement with Techemet, LLC, a metals reclamation facility also located in Pasadena, Texas, to physically separate the spent catalysts from the CD Modules® to perform subsequent reclamation to recover the metal value contained in the spent catalysts.

The Louisiana Department of Environmental Quality (LDEQ), Office of Environmental Services-Waste Permits Division under authority granted by the Louisiana Environmental Quality Act, in particular La. R.S. 30:2014; by the Executive Reorganization Act, in particular La. R.S. 36:234; and by Section 105 of Title 33, Part V of the Louisiana Administrative Code (LAC 33:V.105), particularly LAC 33:V.105.O.1.c and 105.O.2.c, has prepared this proposed draft site-specific variance. The Administrative Authority for this variance is the Secretary of the Louisiana Department of Environmental Quality (LDEQ), or his/her designee.

ConocoPhillips-Alliance submitted a variance request from the Classification of a Solid Waste for hazardous wastes codes K171/K172. Previously, Environmental Issues Management, LLC, on behalf of CDTECH, submitted a variance request on September 4, 2007, from the definition of a solid waste for spent catalyst containing hazardous waste codes K171/K172 requesting concurrence with an identical variance request approved by the Texas Commission on Environmental Quality for CDTECH/Techemet, LLC, on July 3, 2007. In addition, proprietary business information, along with a request for confidentiality was submitted by CDTECH on October 31, 2007. The request for confidentiality was granted by the LDEQ on November 30, 2007. The submittals were reviewed and Notice of Deficiencies (NOD) were issued on January 9, 2008. Responses were received on January 28, 2008. In a meeting on March 18, 2008, Environmental Issues Management, LLC was informed by the Waste Permits Division that the variance request would have to be submitted by the facility (CononcoPhillips-Alliance Refinery, Belle Chasse, LA) where the activity will take place. The facility submitted the variance request on April 11, 2008.

## II. THE VARIANCE PROCESS

The purpose of this fact sheet is to initiate and document the variance decision process. The LDEQ Office of Environmental Services-Waste Permits Division has prepared this draft letter of intent to grant a site-specific variance. This letter of intent sets forth all applicable conditions with which the facility must comply.

The variance process will afford the LDEQ, interested citizens, and other agencies the opportunity to evaluate the information presented in the letter of intent for the site-specific variance from the classification of a solid waste and the regulatory requirements and all other applicable information.

The public is given a minimum of thirty (30) days to review and comment on the draft site-specific variance. The Administrative Authority, prior to making a decision or taking any final action on the draft site-specific variance, will consider all significant comments. The decision of the Administrative Authority shall be to issue or deny the site-specific variance.

## A. DRAFT SITE-SPECIFIC VARIANCE

The Waste Permits Division reviewed the site-specific variance request and other pertinent technical information, and prepared a draft site-specific variance that contains the language pertaining to the management of the CD Modules® at the listed facility.

This draft site-specific variance is a tentative determination and is not the final decision of the Administrative Authority.

## B. PUBLIC COMMENT PERIOD

LAC 33:V.105.K.2.b requires that the public be given thirty (30) days to comment on the draft site-specific variance decision.

The specific dates for the opening and closing of the public comment period are contained in the public notice that was issued for this particular permitting action. To ensure consideration of your comment, any person interested in commenting on the draft site-specific variance for the ConocoPhillips Alliance Refinery must do so within the thirty (30) day comment period.

Public notice of the draft site-specific variance shall be published in specified newspapers and/or announced on the designated radio station, and mailed to those persons contained on the facility's mailing list.

A public hearing for the draft site-specific variance may be held only if requested in writing or at the Administrative Authority's discretion. The date, location and time would be provided in separate public notice. LDEQ will hold the hearing at least thirty (30) days after the date on which the public notice is given.

## C. LOCATIONS OF AVAILABLE INFORMATION

The administrative record, including all supporting documents is on file at the LDEQ Public Records Center, Room 127, 602 North 5th Street, Baton Rouge, Louisiana. These documents may be inspected (except for proprietary information granted "confidential" by the Department) and copied (at $0.25 per copy page) at any time between the hours of 8:00 to 4:30 p.m., Monday through Friday (except holidays).

In addition, a copy of the draft site-specific variance, fact sheet, and supporting documents are available for review at both the Belle Chasse Branch Library, 8442 Highway 23, Belle Chasse, LA and the Port Sulphur Branch Library, 138 Civic Drive, Port Sulphur LA.

## D. WRITTEN COMMENT SUBMISSION

Interested persons may submit written comments on the draft site-specific variance to the Administrative Authority, at the address listed below, on or before the closing date of the comment period. All comments should include:

(1) the name and address of the commenter,

(2) a concise statement of the exact basis for any comment and supporting relevant facts, upon which the comment is based,

(3) identification of the facility commented on (the EPA Identification Number and the AI number), and

(4) supporting relevant facts upon which the comments are based.

All comments, further requests for information (including copies of this decision and fact sheet) and any requests by public interest groups or individuals who would like to be included in the mailing list, should be made in writing to

Ms. Soumaya Ghosn
Louisiana Department of Environmental Quality
Office of Environmental Services
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313
(225) 219-3276 or fax (225) 219-3309
soumaya.ghosn@la.gov

Any technical questions regarding this draft site-specific variance should be addressed to:

Mr. Keith R. Williams
Louisiana Department of Environmental Quality
Office of Environmental Services
Waste Permits Division
P.O. Box 4313
Baton Rouge, Louisiana 70821-4313
(225) 219-3011 or fax (225) 219-3158
keith.williams@la.gov

## II. DESCRIPTION OF OVERALL SITE

ConocoPhillips Alliance Refinery is a petroleum refining complex located 25 miles south of New Orleans between Highway 23 and the Mississippi River. The refinery produces various products such as gasoline, jet fuel, diesel, propane, benzene, mixed xylene, carbon black feedstock, sulfur and petroleum coke.

## III. HAZARDOUS WASTE FACILITIES

The Alliance Refinery has two units in post closure: the Nine-Acre Land Treatment Unit (LTU) and the Oily Stormwater Pond (OSP) CAMU (Corrective Action Management Unit). A CAMU/Post-Closure permit for the units was issued in 2004 and became effective on October 26, 2004. The closure of the OSP was completed by removal and treatment of water and sludges from the impoundments (Storm By-Pass Pond, Sludge Pond, Pre-Equalization Basin, and Equalization Basin) and the Six-Acre LTU/LTD (Land Treatment Demonstration) Plots. The affected soils and sludges were then excavated and placed in an onsite landfill (CAMU) located at the current site of the OSP with a RCRA approved cap over the CAMU. The closure was approved on September 18, 2006. Post closure care activities are being maintained currently at the site.

# PUBLIC NOTICE

# PUBLIC NOTICE
# LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY (LDEQ)
# CONOCOPHILLIPS-ALLIANCE REFINERY
# DRAFT DECISION DOCUMENT TO GRANT SITE-SPECIFIC VARIANCE FROM CLASSIFICATION AS A SOLID WASTE

The LDEQ, Office of Environmental Services, is accepting written comments on the draft decision document for a site-specific variance from classification as a solid waste for ConocoPhillips-Alliance Refinery, P.O. Box 176, Belle Chase, Louisiana, 70037-0176 for the Alliance Refinery site. **The facility is located at 15551 Hwy 23 South, Belle Chase, Plaquemines Parish.**

ConocoPhillips-Alliance Refinery proposes to seek a site-specific variance from the classification of a solid waste for spent catalysts containing hazardous waste codes K171and K172 in accordance with Title 33, Part V of the Louisiana Administrative Code LAC 33:V.105.O.1.c and 105.O.2.c. The spent catalysts will be generated at the Alliance Refinery in their hydro-processing reactor (Unit 294-LSG (Low Sulfur Gasoline) during hydro-processing catalytic activities. The process includes initial reclamation (deactivation) of the spent catalysts contained in CD Modules®, block-like structures manufactured by Catalytic Distillation Technologies (CDTECH), a company located in Pasadena, Texas.

ConocoPhillips-Alliance Refinery, has established a licensing agreement to use CDTECH's CD Modules® in their hydro-processing reactors. CDTECH has, in turn, established a tolling agreement with Techemet, LLC, a metals reclamation facility also located in Pasadena, Texas. Techemet, LLC will physically separate the spent catalysts from the CD Modules® to perform subsequent reclamation to recover the metal value contained in the spent catalysts.

Written comments, written requests for a public hearing, or written requests for notification of the final decision regarding this permit action may be submitted to Ms. Soumaya Ghosn at LDEQ, Public Participation Group, P.O. Box 4313, Baton Rouge, LA 70821-4313. **Written comments and/or written requests must be received by 12:30 p.m., Wednesday, September 17, 2008.** Written comments will be considered prior to a final permit decision.

If LDEQ finds a significant degree of public interest, a public hearing will be held. LDEQ will send notification of the final permit decision to the applicant and to each person who has submitted written comments or a written request for notification of the final decision.

The draft document, fact sheet and additional documentation are available for review at the LDEQ, Public Records Center, Room 127, 602 North 5th Street, Baton Rouge, LA. Viewing hours are from 8:00 a.m. to 4:30 p.m., Monday through Friday (except holidays). **The available information can also be accessed electronically on the Electronic Document Management System (EDMS) on the DEQ public website at www.deq.louisiana.gov.**

An additional copy may be reviewed at the Plaquemines Parish Library, Belle Chasse Branch, 8442 Highway 23, Belle Chasse, LA 70037.

Inquiries or requests for additional information regarding this permit action should be directed to Keith R. Williams, LDEQ, Waste Permits Division, P.O. Box 4313, Baton Rouge, LA 70821-4313, phone (225) 219-3011.

Persons wishing to be included on the LDEQ permit public notice mailing list or for other public participation related questions should contact the Public Participation Group in writing at LDEQ, P.O. Box 4313, Baton Rouge, LA 70821-4313, by email at deqmaillistrequest@la.gov or contact the LDEQ Customer Service Center at (225) 219-LDEQ (219-5337).

**Permit public notices including electronic access to the draft permit and associated information** can be viewed on the LDEQ permits public webpage at www.deq.louisiana.gov/apps/pubNotice/default.asp and general information related to the public participation in permitting activities can be viewed at www.deq.louisiana.gov/portal/tabid/2198/Default.aspx.

Alternatively, individuals may elect to receive the permit public notices via email by subscribing to the LDEQ permits public notice List Server at www.doa.louisiana.gov/oes/listservpage/ldeq_pn_listserv.htm

**All correspondence should specify AI Number 2418, Permit Number LAD056024391, and Activity Number PER20080009.**

**Scheduled Publication Date: August 12, 2008**.

BOBBY JINDAL
GOVERNOR

HAROLD LEGGETT, PH.D.
SECRETARY

# State of Louisiana

## DEPARTMENT OF ENVIRONMENTAL QUALITY
## ENVIRONMENTAL SERVICES

August 4, 2008

Via Fax (225) 388-0164

Ms. Susan Bush
Legal Advertising
The Advocate
Post Office Box 588
Baton Rouge, LA 70821-0588

Re: REQUEST FOR PUBLIC COMMENT ON A DRAFT DECISION TO GRANT A SITE-SPECIFIC VARIANCE
CONOCOPHILLIPS, ALLIANCE REFINERY
BELLE CHASSE, PLAQUEMINES PARISH, LOUISIANA
AGENCY INTEREST (AI) NO 2418, LAD056024391, PER20080009

Dear Ms. Bush:

Please publish the attached legal notice regarding the above referenced facility as a regular legal ad in The Advocate *once only* on **Tuesday, August 12, 2008.** You will also receive a copy of the legal notice itself via email at legal.ads@theadvocate.com.

**State regulations require that we provide notification to the public and allow sufficient time for public comments. For this department to be assured that adequate notification is provided, we are requesting that you sign and date the enclosed 'Verification by Newspaper', and fax it to the attention of Ms. Laura Ambeau (225) 325-8157 immediately upon publication. If the notice cannot be published on the date requested, please contact Ms. Ambeau (225) 219-3277 or email laura.ambeau@la.gov.**

Charges for this service should be billed to LDEQ Visa Account No. [redacted] (expiration date [redacted]), Tax Exempt No. 1284900001. Please include the following information on the invoice:

Laura Ambeau (225) 219-3277
Office of Environmental Services/Environmental Assistance Division
Post Office Box 4313
Baton Rouge, LA 70821-4313
**VISA PURCHASE**

The **official proof of publication** in the form of a tear sheet and invoice should be mailed to my attention LDEQ, Environmental Assistance Division, P.O. Box 4313, Baton Rouge, LA 70821-4313.

Thank you for assisting in our effort to serve the public.

Sincerely,

Laura M. Ambeau
Environmental Scientist, Public Participation Group

LA/Attachments/2

# VERIFICATION BY NEWSPAPER

The undersigned verifies that the following public notice was published in the _____(date of publication) edition of The Advocate:

Re: REQUEST FOR PUBLIC COMMENT ON A DRAFT DECISION TO GRANT A SITE-SPECIFIC VARIANCE
CONOCOPHILLIPS, ALLIANCE REFINERY
BELLE CHASSE, PLAQUEMINES PARISH, LOUISIANA
AGENCY INTEREST (AI) N0 2418, LAD056024391, PER20080009

*THE ADVOCATE:*

By: _____ Date: _____

**Immediately upon publication please fax this form, along with a copy of the public notice as it appeared in the newspaper, to Ms. Laura Ambeau (225) 325-8157.**

**PLEASE NOTE:**

**THIS VERIFICATION DOES NOT RELIEVE THE NEWSPAPER OF THE RESPONSIBILITY OF PROVIDING OFFICIAL PROOF OF PUBLICATION, IN THE FORM OF A TEAR SHEET, TO THE LDEQ AS REQUESTED IN OUR COVER LETTER.**

BOBBY JINDAL
GOVERNOR

HAROLD LEGGETT, PH.D.
SECRETARY

# State of Louisiana

## DEPARTMENT OF ENVIRONMENTAL QUALITY
## ENVIRONMENTAL SERVICES

August 4, 2008

Via Fax (504) 393-9327
Phone (504) 392-1619, Ext. 24

Ms. Linda Lien
Legal Advertising
The Plaquemines Gazette
Post Office Box 700
Belle Chasse, LA 70037

Re: REQUEST FOR PUBLIC COMMENT ON A DRAFT DECISION TO GRANT A SITE-SPECIFIC VARIANCE
CONOCOPHILLIPS, ALLIANCE REFINERY
BELLE CHASSE, PLAQUEMINES PARISH, LOUISIANA
AGENCY INTEREST (AI) N0 2418, LAD056024391, PER20080009

Dear Ms. Lien:

Please publish the attached legal notice regarding the above referenced facility as a regular legal ad in the **Plaquemines Gazette** *once only* on **Tuesday, August 12, 2008.** You will also receive a copy of the legal notice itself via email at PublicNotices@PlaqueminesGazette.comt.

**State regulations require that we provide notification to the public and allow sufficient time for public comments. For this department to be assured that adequate notification is provided, we are requesting that you sign and date the enclosed 'Verification by Newspaper', and fax it to the attention of Ms. Laura Ambeau (225) 325-8157 immediately upon publication. If the notice cannot be published on the date requested, please contact Ms. Ambeau (225) 219-3277 or email laura.ambeau@la.gov.**

Charges for this service should be billed to LDEQ Visa Account No. [redacted], (expiration date [redacted]), Tax Exempt No. 1284900001. Please include the following information on the invoice:

Laura Ambeau (225) 219-3277
Office of Environmental Services/Environmental Assistance Division
Post Office Box 4313
Baton Rouge, LA 70821-4313
**VISA PURCHASE**

The **official proof of publication** in the form of a tear sheet and invoice should be mailed to my attention LDEQ, Environmental Assistance Division, P.O. Box 4313, Baton Rouge, LA 70821-4313.

Thank you for assisting in our effort to serve the public.

Sincerely,

Laura Ambeau
Environmental Scientist, Public Participation Group

LA/Attachments/2

# VERIFICATION BY NEWSPAPER

The undersigned verifies that the following public notice was published in the _____(date of publication) edition of The Plaquemines Gazette:

Re: REQUEST FOR PUBLIC COMMENT ON A DRAFT DECISION TO GRANT A SITE-SPECIFIC VARIANCE
CONOCOPHILLIPS, ALLIANCE REFINERY
BELLE CHASSE, PLAQUEMINES PARISH, LOUISIANA
AGENCY INTEREST (AI) N0 2418, LAD056024391, PER20080009

THE PLAQUEMINES GAZETTE:

By: _____ Date: _____

**Immediately upon publication please fax this form, along with a copy of the public notice as it appeared in the newspaper, to Ms. Laura Ambeau (225) 325-8157.**

**PLEASE NOTE:**

**THIS VERIFICATION DOES NOT RELIEVE THE NEWSPAPER OF THE RESPONSIBILITY OF PROVIDING OFFICIAL PROOF OF PUBLICATION, IN THE FORM OF A TEAR SHEET, TO THE LDEQ AS REQUESTED IN OUR COVER LETTER.**

# VERIFICATION BY FACILITY

The undersigned verifies that the ConocoPhillips, Alliance Refinery has received a copy of the draft decision document for a site-specific variance from classification as a solid waste and public notice regarding:

Re: REQUEST FOR PUBLIC COMMENT ON A DRAFT DECISION TO GRANT A SITE-SPECIFIC VARIANCE
CONOCOPHILLIPS, ALLIANCE REFINERY
BELLE CHASSE, PLAQUEMINES PARISH, LOUISIANA
AGENCY INTEREST (AI) N0 2418, LAD056024391, PER20080009

**CONOCOPHILLIPS, ALLIANCE REFINERY**

By: _____ Date: _____

**Please complete and return this form promptly to the address listed below:**

Ms. Laura Ambeau
Louisiana Department of Environmental Quality
Office of Environmental Services
Environmental Assistance Division
PO Box 4313
Baton Rouge, LA 70821-4313
Phone (225) 219-3277

**FAX (225) 325-8157**

BOBBY JINDAL
GOVERNOR

HAROLD LEGGETT, PH.D.
SECRETARY

# State of Louisiana

## DEPARTMENT OF ENVIRONMENTAL QUALITY
## ENVIRONMENTAL SERVICES

August 6, 2008

Phone (504) 274-5000
Fax (504) 274-2463

Billy Nungesser
Parish President, Plaquemines Parish
8056 Highway 23, Suite 308
Belle Chasse, LA 70037

Re: REQUEST FOR PUBLIC COMMENT ON A DRAFT DECISION TO GRANT A SITE-SPECIFIC VARIANCE
CONOCOPHILLIPS, ALLIANCE REFINERY
BELLE CHASSE, PLAQUEMINES PARISH, LOUISIANA
AGENCY INTEREST (AI) NO 2418, LAD056024391, PER20080009

Dear Mr. Nungesser:

The Louisiana Department of Environmental Quality (LDEQ) is enclosing for your reference, a copy of the draft decision document for a site-specific variance from classification as a solid waste that is scheduled to be published in The Advocate and The Plaquemines Gazette on August 12, 2008.

Should you have any questions regarding the facility, additional permit information may be obtained from Mr. Keith R.Williams, LDEQ, Waste Permits Division, P.O. Box 4313, Baton Rouge, LA 70821-4313, telephone (225) 219-3011.

Sincerely,

Laura M. Ambeau
Environmental Scientist, Public Participation Group

LA

Enclosures/2

## VERIFICATION BY PARISH GOVERNMENT

The undersigned verifies that the Parish President, Plaquemines Parish has received a copy of the draft decision document for a site-specific variance from classification as a solid waste regarding:

Re: REQUEST FOR PUBLIC COMMENT ON A DRAFT DECISION TO GRANT A SITE-SPECIFIC VARIANCE
CONOCOPHILLIPS, ALLIANCE REFINERY
BELLE CHASSE, PLAQUEMINES PARISH, LOUISIANA
AGENCY INTEREST (AI) N0 2418, LAD056024391, PER20080009

**Plaquemines Parish Government:**

By: _____ Date: _____

**Please complete and return this form promptly to the address listed below:**

Ms. Laura Ambeau
Louisiana Department of Environmental Quality
Office of Environmental Services
Environmental Assistance Division
PO Box 4313
Baton Rouge, LA 70821-4313
PHONE (225) 219-3277

**FAX (225) 325-8157**

BOBBY JINDAL
GOVERNOR

HAROLD LEGGETT, PH.D.
SECRETARY

# State of Louisiana

## DEPARTMENT OF ENVIRONMENTAL QUALITY
## ENVIRONMENTAL SERVICES

August 6, 2008

Phone (504) 394-3570

Mrs. Emily Savoie
Plaquemines Parish Library, Belle Chase Branch
8442 Highway 23
Belle Chase, Louisiana 70037

Re: REQUEST FOR PUBLIC COMMENT ON A DRAFT DECISION TO GRANT A SITE-SPECIFIC VARIANCE
CONOCOPHILLIPS, ALLIANCE REFINERY
BELLE CHASSE, PLAQUEMINES PARISH, LOUISIANA
AGENCY INTEREST (AI) N0 2418, LAD056024391, PER20080009

Dear Mrs. Savoie:

We request that the enclosed draft decision document for a site-specific variance from classification as a solid waste that is scheduled to be published in The Advocate and The Plaquemines Gazette on August 12, 2008 and public notice associated with the referenced facility be made available for public review upon receipt. It is imperative that this documentation is available for review at all times; therefore, it cannot be checked out by anyone at any time.

The material should be retained during the permitting process. At the close of the permitting period, the Louisiana Department of Environmental Quality, Office of Environmental Services (LDEQ-OES), Permits Division, will provide written notice to you requesting that the information be removed.

Please complete the attached 'Verification by Library' and mail to Ms. Laura Ambeau, LDEQ-OES, Environmental Assistance Division, Post Office Box 4313, Baton Rouge, Louisiana 70821-4313, or Fax to (225) 325-8157.

We appreciate your assistance in our efforts to serve the public. If you have any questions, please call Ms. Ambeau at (225) 219-3277.

Sincerely,

Laura M. Ambeau
Environmental Scientist, Public Participation Group

LA

Attachments/2

# VERIFICATION BY LIBRARY

The undersigned verifies that the Plaquemines Parish Library, Belle Chase Branch, 8442 Highway 23, Belle Chase, LA 70037, has received a draft decision document for a site-specific variance from classification as a solid waste associated with the following public notice:

Re: REQUEST FOR PUBLIC COMMENT ON A DRAFT DECISION TO GRANT A SITE-SPECIFIC VARIANCE
CONOCOPHILLIPS, ALLIANCE REFINERY
BELLE CHASSE, PLAQUEMINES PARISH, LOUISIANA
AGENCY INTEREST (AI) N0 2418, LAD056024391, PER20080009

**PLAQUEMINES PARISH LIBRARY, BELLE CHASE BRANCH:**

By: _____ Date: _____

**Please complete and return this form promptly to the address listed below:**

Ms. Laura Ambeau
Louisiana Department of Environmental Quality
Office of Environmental Services
Environmental Assistance Division
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313
PHONE (225) 219-3277

**FAX (225) 325-8157**

BOBBY JINDAL
GOVERNOR

HAROLD LEGGETT, PH.D.
SECRETARY

# State of Louisiana

## DEPARTMENT OF ENVIRONMENTAL QUALITY

August 6, 2008 ENVIRONMENTAL SERVICES

Phone: (504) 736-7701
Fax: (504) 736-7702
E-Mail: SEROAdmin@LA.GOV

Mr. Mike Algero, Regional Manager
LDEQ Southeast Regional Office
201 Evans Road
Building 4, Suite 420
New Orleans, LA 70123-5230

Re: REQUEST FOR PUBLIC COMMENT ON A DRAFT DECISION TO GRANT A SITE-SPECIFIC VARIANCE
CONOCOPHILLIPS, ALLIANCE REFINERY
BELLE CHASSE, PLAQUEMINES PARISH, LOUISIANA
AGENCY INTEREST (AI) N0 2418, LAD056024391, PER20080009

Dear Mr. Algero:

The Louisiana Department of Environmental Quality (LDEQ) is enclosing for your reference and public review, a copy of the draft decision document for a site-specific variance from classification as a solid waste along with the legal notice to be published in The Advocate and The Plaquemines Gazette on August 12, 2008. It is imperative that these documents are available for review at all times; therefore, they cannot be taken out by anyone at any time.

Should you have any questions regarding the facility, additional permit information may be obtained from Mr. Keith R. Williams, LDEQ, Permits Division, P.O. Box 4313, Baton Rouge, LA 70821-4313, phone (225) 219-3011.

Please complete the attached 'Verification by Regional Office' and mail to Ms. Laura Ambeau, LDEQ-OES, Environmental Assistance Division, Post Office Box 4313, Baton Rouge, Louisiana 70821-4313, or Fax to (225) 325-8157.

We appreciate your assistance in our efforts to serve the public. If you have any questions, please call Ms. Ambeau at (225) 219-3277.

Sincerely,

Laura Ambeau
Environmental Scientist
Public Participation Group

LA / Attachment

# VERIFICATION BY SOUTHEAST REGIONAL OFFICE

The undersigned verifies that the LDEQ, Southeast Regional Office has received a copy of the following draft decision document for a site-specific variance from classification as a solid waste and public notice:

Re: REQUEST FOR PUBLIC COMMENT ON A DRAFT DECISION TO GRANT A SITE-SPECIFIC VARIANCE
CONOCOPHILLIPS, ALLIANCE REFINERY
BELLE CHASSE, PLAQUEMINES PARISH, LOUISIANA
AGENCY INTEREST (AI) N0 2418, LAD056024391, PER20080009

**LDEQ, SOUTHEAST REGIONAL OFFICE:**

By: _____ Date: _____

**Please complete and return this form promptly to the address listed below:**

Ms. Laura Ambeau
Louisiana Department of Environmental Quality
Office of Environmental Services
Environmental Assistance Division
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313
PHONE (225) 219-3277

**FAX (225) 325-8157**

# VERIFICATION BY FIRST FLOOR SCANNING CENTER

THIS INFORMATION MUST BE AVAILABLE FOR PUBLIC VIEWING
AT 8:00AM on
Tuesday, August 12, 2008

The undersigned verifies that a copy of the public notice for the referenced facility has been received by the First Floor Scanning Center:

Re: REQUEST FOR PUBLIC COMMENT ON A DRAFT DECISION TO GRANT A SITE-SPECIFIC VARIANCE
CONOCOPHILLIPS, ALLIANCE REFINERY
BELLE CHASSE, PLAQUEMINES PARISH, LOUISIANA
AGENCY INTEREST (AI) N0 2418, LAD056024391, PER20080009

By: _____ Date: _____

The Public Participation Group contact for this packet of information is
Laura Ambeau, Rm. 321-31, 2-3277

# DRAFT DECISION

BOBBY JINDAL
GOVERNOR

HAROLD LEGGETT, PH.D.
SECRETARY

# State of Louisiana

DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

Chris Chandler, Refinery Manager
ConocoPhillips-Alliance Refinery
P.O. Box 176
15551 HWY 23 South
Belle Chase, LA 70037-0176

**RE:** ConocoPhillips-Alliance Refinery
AI#2418/LAD 056 024 391/PER20080009
Draft Decision Document for Variance from the Classification as a Solid Waste for Waste Codes K171/K172 Pursuant to LAC 33:V.105.O.1.c and 105.2.c.

Dear Mr. Chandler:

The Waste Permits Division has received your submittal dated April 11, 2008, regarding the request to grant a variance from the classification as a solid waste for spent catalyst containing waste codes K171/K172 resulting from hydro-processing activities conducted at your facility, in conjunction with Catalytic Distillation Technologies (CDTECH) located in Pasadena, Texas. The variance will cover the spent catalysts contained in CDTECH's CD Modules®, following initial reclamation of the spent catalysts within the hydro-processing reactor (Unit 294-LSG) operated by your facility. After hydro-processing activities have occurred, the CD Modules® will be transported to Techemet, LLC located in Pasadena, Texas for further reclamation to recover the metal value in the spent catalysts contained in the CD Modules®.

After careful review and consideration of your submittal and additional information (proprietary business information submitted on October 31, 2007, along with a request for confidentiality, granted by the LDEQ on November 30, 2007), the Waste Permits Division hereby grants ConocoPhillips-Alliance Refinery's request for a variance from the classification as a solid waste, those spent catalyst containing waste codes K171/K172 contained within the CD Modules® utilized in the hydro-processing reactor (Unit 294-LSG). This variance remains valid as long as CDTECH retains ownership of the spent catalysts contained within the CD Modules® and the following conditions are met:

- *The management and transport of the spent catalysts shall not: 1) cause a discharge or imminent threat of a discharge into or adjacent to the waters of the state 2) create and maintain a nuisance or 3) violate any applicable provisions of the Louisiana Administrative Code and the U.S. and Louisiana Department of Transportation laws and regulations;*

- *The contractual agreements and obligations between ConocoPhillips-Alliance Refinery and CDTECH, which have licensing agreements with Techemet, LLC are accurate, complete, as presented to the LDEQ in the request, and which this variance is based and there is a strict compliance with the terms of those agreements and obligations;*

- *The catalysts are deactivated (initial reclamation) prior to leaving the unit at ConocoPhillips-Alliance Refinery (at a minimum, this shall mean that the catalysts do not exhibit the characteristics of ignitability (D001) or reactivity (D003)), shall not be pyrophoric, shall meet all of the standards and criteria for being deactivated found in the Supervisory Operating Manual and in compliance with the Clean Air Act and LDEQ air regulatory requirements. The spent material shall meet all U.S. and Louisiana Department of Transportation regulations and conditions for shipment;*

- *All records of how the catalysts are reclaimed and recycled at Techemet's facility shall be maintained in an easy to retrieve and easy to copy format; and*

- *If at anytime the spent catalysts are sent for disposal prior to final reclamation, the material shall retain the hazardous waste listings of K171/K172 and be properly disposed of at a permitted disposal facility in accordance with the Hazardous Waste Regulations.*

This variance is based on the assumption that the information provided to LDEQ by ConocoPhillips-Alliance Refinery and CDTECH is complete and accurate. ConocoPhillips-Alliance Refinery shall inform the LDEQ by written notification in a timely manner, of any deviation from or changes to the information in the variance request which would affect ConocoPhillips-Alliance Refinery's ability to comply with applicable regulatory requirements or variance conditions. This variance may be suspended, modified, revoked, reissued or terminated for cause.

The granting of this variance does not constitute a defense against any past or future non-compliance with state or federal regulations. Additionally, the granting of this variance does not constitute Department approval for any activity or process that may require a permit or a modification to an existing permit.

Please reference your Agency Interest Number 2418, EPA ID Number LAD 056 024 391 and Permit Activity Number PER20080009 on all future correspondence pertaining to this matter. If you have any questions, please contact Keith R. Williams of the Waste Permits Division at (225) 219-3011.

Sincerely,

Cheryl Sonnier Nolan
Assistant Secretary

c: Chuck Handrich – Waste Permits Division
Tyler Ginn – Enforcement Division

# ADDITIONAL DOCUMENTATION

COPY

ConocoPhillips

Alliance Refinery
Agency Interest No. 2418
P.O. Box 176
15551 Hwy. 23 South
Belle Chasse, LA 70037-0176

April 11, 2008

original to IOHW
SM
copy to HW/G2/Booker
PAAR

Cheryl Nolan, Assistant Secretary
Office of Environmental Services
Louisiana Department of Environmental Quality
P. O. Box 4313
Baton Rouge, LA 70821-4313

RE: R20080004

2008 APR 17 PM 2:37
DEQ - OES

CERTIFIED MAIL, RETURN RECEIPT REQUESTED
7006 2760 0004 7967 6371

RE: Request for Variance from Classification as a Solid Waste
Pursuant to 33 LAC V.105.O.1(c) and 105.O.2(c)

Dear Ms. Nolan:

Pursuant to Louisiana Administrative Code, under 33 LAC V.105.O.1(c) and 105.O.2(c), ConocoPhillips Company (ConocoPhillips) and Catalytic Distillation Technologies (CDTECH) are requesting the Louisiana Department of Environmental Quality (LDEQ) to grant a variance from classification as a solid waste for CDTECH's catalyst modules (CD Modules®), following the initial reclamation of the CD Modules® within hydroprocessing reactors operated by ConocoPhillips at its Alliance refinery, located in Belle Chasse, Louisiana.

ConocoPhillips and CDTECH consider the granting of the variance to be both warranted and justified. The requested variance will promote the recovery of valuable non-renewable resources, and advance CDTECH's sustainable processing applications that provide environmental benefit to ConocoPhillips and the state of Louisiana.

ConocoPhillips and CDTECH appreciate the LDEQ's prompt consideration of this request. If further discussion or additional clarification is required, please contact Mr. Robert Phelan of Environmental Issues Management, L.L.C. at (985) 966-1000, or Mr. Randy Borne of my staff at (504) 656-3352.

Sincerely,

Chris Chandler
Refinery Manager

**Request for Variance from Classification as a Solid Waste Pursuant to Title 33 of the Louisiana Administrative Code Under LAC §§ 105.O.1(c) and 105.O.2(c)**

Pursuant to Title 33 of the Louisiana Administrative Code, under LAC §§ 105.O.1(c) and 105.O.2(c), ConocoPhillips Company (ConocoPhillips) and Catalytic Distillation Technologies (CDTECH) request the Louisiana Department of Environmental Quality (LDEQ) to grant a variance from classification as a solid waste for CDTECH's catalyst modules (CD Modules®), following the initial reclamation of the CD Modules® within hydroprocessing reactors operated by ConocoPhillips at its Alliance refinery, located near Belle Chasse, Louisiana.

ConocoPhillips Company - EPA ID # LAD056024391 / LDEQ AI # 2418
Alliance Refinery
15551 Highway 23 / Post Office Box 176
Belle Chasse, Louisiana 70037

ConocoPhillips has an established licensing agreement with CDTECH, which enables ConocoPhillips to utilize CDTECH's CD Modules® within hydroprocessing reactors operated by ConocoPhillips at its Alliance refinery. Based on the information provided in this document and its attachments, ConocoPhillips and CDTECH consider the partially reclaimed CD Modules® to be clearly commodity-like under each of the criteria set forth under 33 LAC V.105.O.2(c). ConocoPhillips and CDTECH consider the granting of the variance to be warranted and justified. The requested variance will enable CDTECH to recover valuable non-renewable resources from the partially reclaimed CD Modules,® and advance CDTECH's sustainable processing applications that provide environmental benefit to ConocoPhillips and the state of Louisiana.

CDTECH, a partnership between ABB Lummus Global and Chemical Research and Licensing, develops and commercializes catalytic distillation based processes for the chemical, petrochemical and refining industries. CDTECH, which is based in Pasadena, Texas, provides unique alternative catalytic processing options to the petroleum refining industry under licensing agreements.

Catalytic Distillation Technologies - EPA ID # TXD987988847
10100 Bay Area Boulevard
Pasadena, TX 77505

CDTECH's alternative catalytic processing applications enhance yields, extend catalyst life cycle and provide a cleaner burning gasoline with maximum octane retention. CDTECH's alternative catalytic processing applications are applied at ConocoPhillips' Alliance refinery under a licensing agreement which assures CDTECH the option to retain ownership of the CD Modules,® which are the subject material of ConocoPhillips' and CDTECH's variance request.

CDTECH's licensing agreement with ConocoPhillips is considered proprietary. On October 31, 2007, CDTECH submitted a single character request pursuant to Title 33, Part 1, Subpart 1, Chapter 5, Section 503 of the Louisiana Administrative Code, which provided an example of CDTECH's standard licensing agreement as a confidential document supporting ConocoPhillips' and CDTECH's request.

**Background Information**

A review of fuel sulfur regulatory activities during the last five years, documents that sulfur level requirements for conventional fuels will continue to be driven lower and lower. To achieve newly established sulfur requirements, the petroleum refining industry is required to significantly increase the performance of its hydroprocessing units.

Increasing the performance of these units results in severe operating conditions (i.e., increased temperatures and pressures), that in turn results in significantly shortened life cycles for conventional hydroprocessing catalysts (i.e., typical three-fold life cycle reductions). It is anticipated that these more severe operating conditions will significantly increase the industry's annual usage of hydroprocessing catalysts from 50 million pounds, to as much as 130 million pounds.

This projected increase in annual usage and reduced unit efficiencies have provided the incentive for the development and use of CDTECH's alternative catalytic processing applications, which provide increased hydroprocessing and hydrodesulfurization efficiency. CDTECH's processing applications provide the petroleum refining industry with improved performance and extended catalyst life cycle (approximately seven years, compared to two years for conventional fixed-bed catalyst applications), through significantly increased catalytic efficiency. The extended catalyst life cycles achieved by CDTECH's process applications provides the petroleum refining industry with significant reductions in hazardous waste generation, potentially reducing their spent catalyst generation rates as much as three-fold.

CDTECH's CD Modules®

The principle component of CDTECH's alternative catalytic processing applications, is the CD Module.® CD Modules® are comprised of layers of catalyst particles that are encased within numerous "honeycombed" stainless steel mesh plates, that are stacked in multiple layers to form CD Modules.® The physical form of an individual CD Module® is approximately four feet in length, one foot in height and one foot in width.

The block-like structure of the CD Module,® allows petroleum refiners the ability to stack numerous individual modules together in progressive layers to fill the interior of the hydroprocessing reactor. The CD Modules® can be specifically sized to fit snugly into the hydroprocessing reactor to provide the maximum active catalytic surface area

possible within the reactor. A photograph of several CD Modules® stacked on a pallet is included as an attachment **(Attachment A)** to this document.

Conventional Spent Catalyst Reclamation - Conventional spent hydroprocessing catalysts do not undergo a deactivation step prior to their removal from fixed-bed hydroprocessing reactors, because they are removed from the reactors without requiring personnel entry. The typical removal method is to dump the spent catalysts directly into containers, which are then sealed after a block of dry ice (i.e., carbon dioxide) is placed with the container to ensure that the spent catalysts remain in an oxygen-reduced atmosphere.

Under these conditions, conventional spent hydroprocessing catalysts are still in a reduced chemical state and will immediately start to self-heat (i.e., exhibit the hazardous characteristic of reactivity, D003) upon contact with ambient air. The self-heating properties of conventional spent catalysts was the primary concern and justification for the U.S. EPA's listing of spent hydrotreating (K171) and hydrorefining (K172) catalysts as hazardous wastes under 40 CFR 261.32, which was promulgated as a final rule on August 06, 1998 (63 FR 42110).

The initial reclamation step for conventional spent hydroprocessing catalysts is thermal treatment to oxidize and deactivate the self-heating properties, and remove hydrocarbon compounds which interfere with metals recovery processes. This initial reclamation step for conventional spent hydroprocessing catalysts is essentially identical to the initial reclamation step for the CD Modules,® with the exception that the initial reclamation step for the CD Modules® within CDTECH's alternative catalytic processing applications is performed within the hydroprocessing reactor.

**Justification for Variance Request**

Pursuant to the provisions under 33 LAC §105.O.1(c), ConocoPhillips and CDTECH request the LDEQ to grant a variance from classification as a solid waste for CD Modules,® following their initial reclamation within hydroprocessing reactors operated by ConocoPhillips at its Alliance refinery. Based on 33 LAC §105.O.2(c), *Standards and Criteria for Variances from Classification as a Solid Waste*, the LDEQ can grant a variance from classification as a solid waste for partially reclaimed materials that require further reclamation, if after initial reclamation, the material is commodity-like but must be reclaimed further before recovery is completed. ConocoPhillips and CDTECH consider their request to be justified based on the CD Modules® that are partially reclaimed prior to their removal from ConocoPhillips' hydroprocessing reactors, are far more commodity-like than waste-like, based on the monetary value of the recoverable metals contained within the partially reclaimed CD Modules,® which must undergo further reclamation before the recovery of the metals value is complete.

Initial Reclamation - Prior to their removal from ConocoPhillips' hydroprocessing reactors, the spent catalysts contained within the CD Modules® are initially reclaimed through deactivation and hydrocarbon removal. The initial reclamation involves controlled oxidation (i.e., oxidizing the CD Modules® in the reactor), until the spent catalysts contained within the CD Modules® no longer exhibit any self-heating (i.e., pyrophoric or reactive) properties, and hydrocarbons are removed to the point where the spent catalysts contained within the CD Modules® contain minimal hydrocarbons.

Deactivation is a significant step in the initial reclamation of the CD Modules,® rendering the spent catalysts contained within the CD Modules® inert, prior to subsequent reclamation. In addition to deactivation, the removal of a significant contaminant (i.e., hydrocarbon compounds) from the spent catalysts contained within the CD Modules® is also a significant step in the initial reclamation of the CD Modules.® Removal of hydrocarbon compounds renders the spent catalysts contained within the CD Modules® amenable to subsequent reclamation (i.e., recovery) of the metals value of the partially reclaimed spent catalysts contained within the CD Modules.®

Specific procedures and protocol for the deactivation of the CD Modules,® prior to their removal from hydroprocessing reactors, are considered proprietary. On October 31, 2007, CDTECH submitted a single character request pursuant to Title 33, Part 1, Subpart 1, Chapter 5, Section 503 of the Louisiana Administrative Code, which provided an example of CDTECH's Supervisory Operating Manual, defining the procedures and protocol for the initial reclamation of the CD Modules® within hydroprocessing reactors, as a confidential document supporting ConocoPhillips' and CDTECH's variance request.

Subsequent Reclamation - As previously noted, following their initial reclamation within ConocoPhillips' hydroprocessing reactors, the CD Modules® require subsequent reclamation to recover the metals value contained within the CD Modules.® The physical form of the CD Modules® requires separation of the partially reclaimed (i.e., deactivated) spent catalysts from the stainless steel mesh containers of the CD Modules.® To accomplish this requirement, CDTECH has secured the established and demonstrated materials handling capabilities of Techemet LLC (Techemet), under a tolling agreement.

Techemet operates a metals reclamation facility in Pasadena, Texas, for the management and recovery of both precious and commodity metals. Techemet was established in 1987, to support the reclamation of Platinum group metals from spent catalysts in automobile catalytic converters. Techemet's extensive experience in the removal of spent catalyst from containers provides a significant contribution to CDTECH's alternative processing applications.

On July 03, 2007, pursuant to Title 30 of the Texas Administrative Code, under TAC §§ 335.18(a)(3), 335.19(c) and 335.21, Techemet was granted a variance from classification as a solid waste under the authority of the Texas Commission on Environmental Quality

(TCEQ). The variance granted by the TCEQ was for CDTECH's CD Modules,® following the initial reclamation of the CD Modules® within hydroprocessing reactors at petroleum refining facilities within the state of Texas. A copy of the TCEQ's variance determination is included as an attachment **(Attachment B)** to this document.

Techemet's tolling agreement with CDTECH is considered proprietary. On October 31, 2007, CDTECH submitted a single character request pursuant to Title 33, Part 1, Subpart 1, Chapter 5, Section 503 of the Louisiana Administrative Code, which provided an example of CDTECH's tolling agreement with Techemet, as a confidential document supporting ConocoPhillips' and CDTECH's variance request.

Subsequent reclamation of the metals value contained within the partially reclaimed spent catalysts, following their separation from the stainless steel mesh containers of the CD Modules,® is typically accomplished by the metals reclamation and primary metals refining industries. These commercial facilities require the partially reclaimed spent catalysts to be shipped to their facilities in more traditional containers (e.g., flo-bins, super sacks, drums, etc.), which are amenable to their on-site materials handling equipment and manufacturing processes. CDTECH maintains contracts negotiated with commercial facilities that perform subsequent reclamation of the commodity metals contained within the partially reclaimed spent catalysts that have been separated from the CD Modules.®

Precedent Variances - On May 11, 2005, the TCEQ issued a variance from the definition of solid waste to DuraTherm, Inc. (DuraTherm). The variance granted by the TCEQ was for partially reclaimed spent petroleum refining catalysts (i.e., K171 and K172), following their initial reclamation within a thermal desorption unit. The TCEQ based its determination on initial reclamation being achieved through deactivation and hydrocarbon removal. The TCEQ acknowledged that both deactivation and hydrocarbon removal qualified as forms of initial reclamation, and represented the basis for the granting of the variance. A copy of the TCEQ's decision, including DuraTherm's variance request, has been provided as an attachment **(Attachment C)** to this document.

On July 03, 2007, pursuant to Title 30 of the Texas Administrative Code, under TAC §§ 335.18(a)(3), 335.19(c) and 335.21, CDTECH was granted a variance from classification as a solid waste under the authority of the Texas Commission on Environmental Quality (TCEQ). The variance granted by the TCEQ was for CDTECH's CD Modules,® following the initial reclamation of the CD Modules® within hydroprocessing reactors at petroleum refining facilities within the state of Texas. The TCEQ acknowledged that both deactivation and hydrocarbon removal qualified as forms of initial reclamation, and represented the basis for the granting of the variance. A copy of the TCEQ's variance determination is included as an attachment **(Attachment D)** to this document.

## Requested Action

ConocoPhillips and CDTECH request the LDEQ to grant a variance from classification as a solid waste, pursuant to the provisions 33 LAC §105.O.1(c), for CD Modules® following the initial reclamation of the CD Modules® within hydroprocessing reactors operated by ConocoPhillips at its Alliance refinery. As previously noted, ConocoPhillips has an established licensing agreement with CDTECH, which enables ConocoPhillips to utilize CDTECH's CD Modules® within hydroprocessing reactors at its Alliance refinery.

The initial partial reclamation of the CD Modules,® prior to their removal from the hydroprocessing reactors, is accomplished through the performance of the procedures and protocol specified within CDTECH's Supervisory Operating Manual for the deactivation of the CD Modules.® The terms of ConocoPhillips' and CDTECH's licensing agreement assure that the specific procedures and protocol for the deactivation of the CD Modules,® specified within CDTECH's Supervisory Operating Manual, are adhered to and accomplished prior to the removal of the CD Modules® from ConocoPhillips' hydroprocessing reactors. The terms of the licensing agreement also assures CDTECH the option to retain ownership of the CD Modules,® which enables CDTECH to conduct subsequent reclamation of the CD Modules® under its established tolling agreement with Techemet.

ConocoPhillips' and CDTECH's requested variance is limited to partially reclaimed CD Modules® that are initially reclaimed within hydroprocessing reactors operated by ConocoPhillips at its Alliance refinery. In addition, ConocoPhillips' and CDTECH's requested variance is limited to partially reclaimed CD Modules® that are destine for subsequent reclamation of metals value contained within the CD Modules.®

33 LAC §105.O.2(c), *Standards and Criteria for Variances from Classification as a Solid Waste*, states, as follows:

> *"The administrative authority may grant requests for a variance from classifying as a solid waste those materials that have been reclaimed but must be reclaimed further before recovery is completed if, after initial reclamation, the resulting material is commodity-like (even though it is not yet a commercial product, and has to be reclaimed further). ..."*

ConocoPhillips' and CDTECH's request is based on the fact that the CD Modules® are partially reclaimed prior to their removal from hydroprocessing reactors operated by ConocoPhillips at its Alliance refinery, and are far more commodity-like than waste-like based on the monetary value of the recoverable metals contained within the CD Modules,® which must undergo further reclamation before the recovery of their metals value is complete.

The regulations under 33 LAC §105.O.2(c) stipulate the criteria the administrative authority is to apply in determining whether to grant a variance from classification as a solid waste for materials that have been reclaimed, but must be reclaimed further before recovery is completed. The criteria set forth, are as follows:

*i. The degree of processing the material has undergone and the degree of further processing that is required,*

*ii. The value of the material after it has been reclaimed,*

*iii. The degree to which the reclaimed material is like an analogous raw material,*

*iv. The extent to which an end market for the reclaimed material is guaranteed,*

*v. The extent to which the reclaimed material is handled to minimize loss, and*

*vi. Other relevant factors.*

The criteria listed above, are based on determining whether the partially reclaimed material is more commodity-like, rather than waste-like. This intention was stipulated in the pre-amble to the regulations in Federal Register Volume 50, Number 3, January 04, 1985, Page 655.

i **the degree of processing the material has undergone and the degree of further processing that is required;**

Prior to their removal from hydroprocessing reactors operated by ConocoPhillips at its Alliance refinery, the CD Modules® are subjected to a specific and consistent initial reclamation process (i.e., deactivation). The deactivation process, which is required by CDTECH's licensing agreements and based on procedures and protocol specified within CDTECH's Supervisory Operating Manual for the deactivation of the CD Modules,® involves controlled oxidation (i.e., oxidizing the CD Modules® in the reactor) until the spent catalysts contained within the CD Modules® no longer exhibit any self-heating properties (i.e., reactivity, D003). The deactivation process also removes hydrocarbon compounds to the point where the spent catalysts contained within the CD Modules® contain minimal residual hydrocarbons.

Deactivation and hydrocarbon removal represent the initial reclamation step (i.e., partial reclamation) required to assure that the CD Modules® are inert prior to their removal from the reactor and capable of being managed as a commodity material. The initial reclamation step is also required to remove the majority of residual hydrocarbons, which are a significant contaminant that interferes with subsequent metals reclamation processes.

Following the initial reclamation of the CD Modules® within hydroprocessing reactors operated by ConocoPhillips at its Alliance refinery (i.e., deactivation and hydrocarbon removal), subsequent reclamation is required to separate the partially reclaimed spent catalysts from the CD Modules® stainless steel mesh containers. As previously noted, Techemet's established and demonstrated materials handling capabilities, provide CDTECH with the capabilities to remove the partially reclaimed spent catalysts from the CD Modules.® Following the removal of the partially reclaimed spent catalysts from the CD Modules,® the spent catalysts are consolidated in more traditional containers and volumes (e.g., flo-bins, drums, etc.), which are amenable for additional subsequent reclamation.

Additional subsequent reclamation of the partially reclaimed spent catalysts that have been separated from the CD Modules® is typically accomplished by the metals reclamation and primary metals refining industries. CDTECH operates contracts negotiated with commercial facilities that perform subsequent reclamation of the commodity metals from the partially reclaimed spent catalysts that have been separated from the CD Modules.®

**ii the value of the material after it has been reclaimed;**

Following initial reclamation (deactivation and hydrocarbon removal), the value of the recoverable metals contained within the partially reclaimed CD Modules® is dependent on commercial considerations influenced by the national and international metals markets. The recoverable value for stainless steel, which comprises the physical structure of the stainless steel mesh containers that comprise the partially reclaimed CD Modules,® is approximately one dollar per pound. Molybdenum is priced on the international metals market at $30 to $35 per pound. Cobalt is priced on the international metals market at $40 to $48 per pound. Nickel is priced on the international metals market at $12 to $14 per pound.

The amount of recoverable metals contained within the partially reclaimed CD Modules® vary, dependent upon catalyst specifications provided to CDTECH by ConocoPhillips. The spent catalysts contained within the partially reclaimed CD Modules® consistently have concentrations of recoverable metals (i.e., molybdenum, cobalt and nickel) ranging from 10 to 35 percent by weight. The amount of recoverable stainless steel contained within the partially reclaimed CD Modules® remains consistent, based on the structural configuration requirements of the CD Modules.®

Based on conservative estimates for the concentration of metals contained within the CD Modules,® the value of partially reclaimed CD Modules® is significant. Assuming an average molybdenum concentration of 10 percent by weight, a ton of spent catalysts contained within the partially reclaimed CD Modules® contains 200 pounds of molybdenum, worth approximately 6,000 to 7,000 U.S. dollars. Even if the cost of

subsequent reclamation reduces the value of the partially reclaimed CD Modules,® the remaining value of the end products is significant.

In addition, partially reclaimed CD Modules® inherently contain a combination of two or more recoverable metal (e.g., nickel and cobalt, molybdenum and cobalt, etc.) which provides additional value. The remaining materials balance for the spent catalysts contained within the partially reclaimed CD Modules® is comprised of the catalyst alumina oxide substrate (i.e., the high surface area structural component of the catalyst). Currently, the end uses and recoverable value for alumina oxide is variable. However, there is a well established market for its use in a variety of commercial products.

**iii the degree to which the reclaimed material is like an analogous raw material;**

Raw materials which are analogous to the materials recovered from the partially reclaimed CD Modules® are non-renewable resources. Continued mining of natural ore deposits is the only alternative to the recovery of these valuable resources. Therefore, the recovery of the non-renewable resources contained within the partially reclaimed CD Modules® is of significant importance to maintaining a sustainable metals market.

High grade natural ore deposits contain only minimal amounts of molybdenum, cobalt and nickel. Commercial deposits contain average concentrations of 0.5 percent molybdenum, 2.0 percent nickel and 0.05 percent cobalt. The low concentrations of metals within the natural ore deposits results in the removal of massive volumes of over burden, and requires significant amounts of energy and resources for the mining industry to refine and concentrate the ore.

The process of concentrating the ore, utilizes hydraulic floatation and leaching techniques which result in the disposal of additional massive volumes of tailings and waste waters. The metal concentrates are further processed to form technical grade metal oxides or metal compounds, which are used to manufacture a wide variety of commercial products.

The materials recovered from the partially reclaimed CD Modules,® are primarily metal oxides ranging from five to 35 percent by weight, and analogous to metals concentrates produced from natural ores. Following the initial partial reclamation of the CD Modules® (i.e., deactivation and hydrocarbon removal), the metal oxides are capable of being separated from the partially reclaimed CD Modules® and recovered using subsequent reclamation processes (e.g., hydrometallurgical or solvent extraction) to produce technical grade metal oxides, or directly used as effective substitutes for commercial metals concentrates in smelting operations.

iv **the extent to which an end market for the reclaimed material is guaranteed;**

As previously noted, the materials recovered (i.e., reclaimed materials) from the partially reclaimed CD Modules,® are non-renewable resources. Therefore, an extensive and sustainable national and international end market exists for their long-term use. Materials recovered from the partially reclaimed CD Modules® include stainless steel, molybdenum, cobalt and nickel.

Stainless steel, molybdenum, cobalt and nickel have well established markets. Stainless steel is directly recycled. Molybdenum is used in the manufacturing of tool and high speed steels, cast iron, super alloys (i.e., nickel- and titanium-based alloys), catalysts, pigments, corrosion inhibitors and lubricants. Cobalt is used in the manufacturing of super alloys, cemented carbides, magnets, catalysts, electroplating, pigments and battery electrodes. Nickel is used in the manufacturing of stainless steel, tubular metal products, electroplating, catalysts, non-ferrous alloys and chemicals.

v **the extent to which the reclaimed material is handled to minimize loss;**

As previously noted, ConocoPhillips and CDTECH have an established licensing agreement. The terms of ConocoPhillips' and CDTECH's licensing agreement assure that the specific procedures and protocol for the deactivation of the CD Modules,® specified within CDTECH's Supervisory Operating Manual, are adhered to and accomplished prior to the removal of the CD Modules® from ConocoPhillips' hydroprocessing reactors.

In addition, the terms of the licensing agreement also assures CDTECH the option to retain ownership of the CD Modules,® which enables CDTECH to conduct subsequent reclamation of the partially reclaimed CD Modules® under its established tolling agreement with Techemet. Based on conservative estimates for the concentration of metals contained within the partially reclaimed CD Modules,® the value of partially reclaimed CD Modules® is significant. Therefore, the ability to conduct subsequent reclamation of the partially reclaimed CD Modules® provides significant financial incentive for ConocoPhillips and CDTECH to minimize potential loss of recoverable materials during the management, storage and transport of the partially reclaimed CD Modules.®

Furthermore, the physical integrity of the partially reclaimed CD Modules® provides for efficient materials handling, transport and storage. Following their removal from hydroprocessing reactors at petroleum refineries, the CD Modules® retain their modular structure and are capable of being stacked on pallets and wrapped with weather-proofing materials for storage and shipment as a commodity material. The United States Department of Transportation (U.S. DOT) has approved the international transport of CD Modules® on shrink-wrapped pallets. A copy of the U.S. DOTs approval notification has been included as an attachment **(Attachment E)** to this document.

**vi other relevant factors.**

The LDEQ's ability to grant a variance from classification as a solid waste for materials that have been reclaimed, but must be reclaimed further before recovery is completed is well established. The LDEQ has administrative authority to receive, review and grant variances from the definition of a solid waste, and regulations under 33 LAC §105.O.2(c) stipulate the criteria the administrative authority is to apply in determining whether to grant a variance from classification as a solid waste for materials that have been reclaimed, but must be reclaimed further before recovery is completed. The U.S. EPA has recently restated its established position regarding the authority of authorized state agencies to grant variances from the definition of solid waste. On February 21, 2006, the U.S. EPA clarified that authorized states have reasonable latitude to case-by-case situations within their state. A copy of the U.S. EPA's position statement has been included as an attachment **(Attachment F)** to this document.

**Summary**

Based on the information provided within this document and its attachments, ConocoPhillips and CDTECH consider partially reclaimed CD Modules® to be clearly commodity-like under each of the criteria set forth under 33 LAC §§ 105.O.2(c). Therefore, pursuant to the provisions of 33 LAC §105.O.1(c), ConocoPhillips and CDTECH request the LDEQ to grant a variance from classification as a solid waste for CD Modules,® following the initial reclamation of the CD Modules® within hydroprocessing reactors operated by ConocoPhillips at its Alliance refinery, located near Belle Chasse, Louisiana.

The initial partial reclamation of the CD Modules,® prior to their removal from the hydroprocessing reactors, is accomplished through the performance of the procedures and protocol specified within CDTECH's Supervisory Operating Manual for the deactivation of the CD Modules.® The terms of ConocoPhillips' and CDTECH's licensing agreement assure that the specific procedures and protocol for the deactivation of the CD Modules,® specified within CDTECH's Supervisory Operating Manual, are adhered to and accomplished prior to the removal of the CD Modules® from ConocoPhillips' hydroprocessing reactors. The terms of the licensing agreement also assures CDTECH the option to retain ownership of the CD Modules,® which enables CDTECH to conduct subsequent reclamation of the CD Modules® under its established tolling agreement with Techemet.

ConocoPhillips' and CDTECH's requested variance is limited to partially reclaimed CD Modules® that are initially reclaimed within hydroprocessing reactors operated by ConocoPhillips at its Alliance refinery. In addition, ConocoPhillips' and CDTECH's requested variance is limited to partially reclaimed CD Modules® that are destine for subsequent reclamation of metals value contained within the CD Modules.®

The granting of ConocoPhillips' and CDTECH's variance request is warranted and justified to promote and advance the recovery of valuable non-renewable resources, and help to sustain CDTECH's alternative catalytic processing applications which provide significant environmental benefit to ConocoPhillips and the state of Louisiana.

Attachments (6):

Attachment A Photograph, CD Modules®

Attachment B TCEQ's Variance Determination for Techemet

Attachment C TCEQ's Variance Determination for DuraTherm

Attachment D TCEQ's Variance Determination for CDTECH

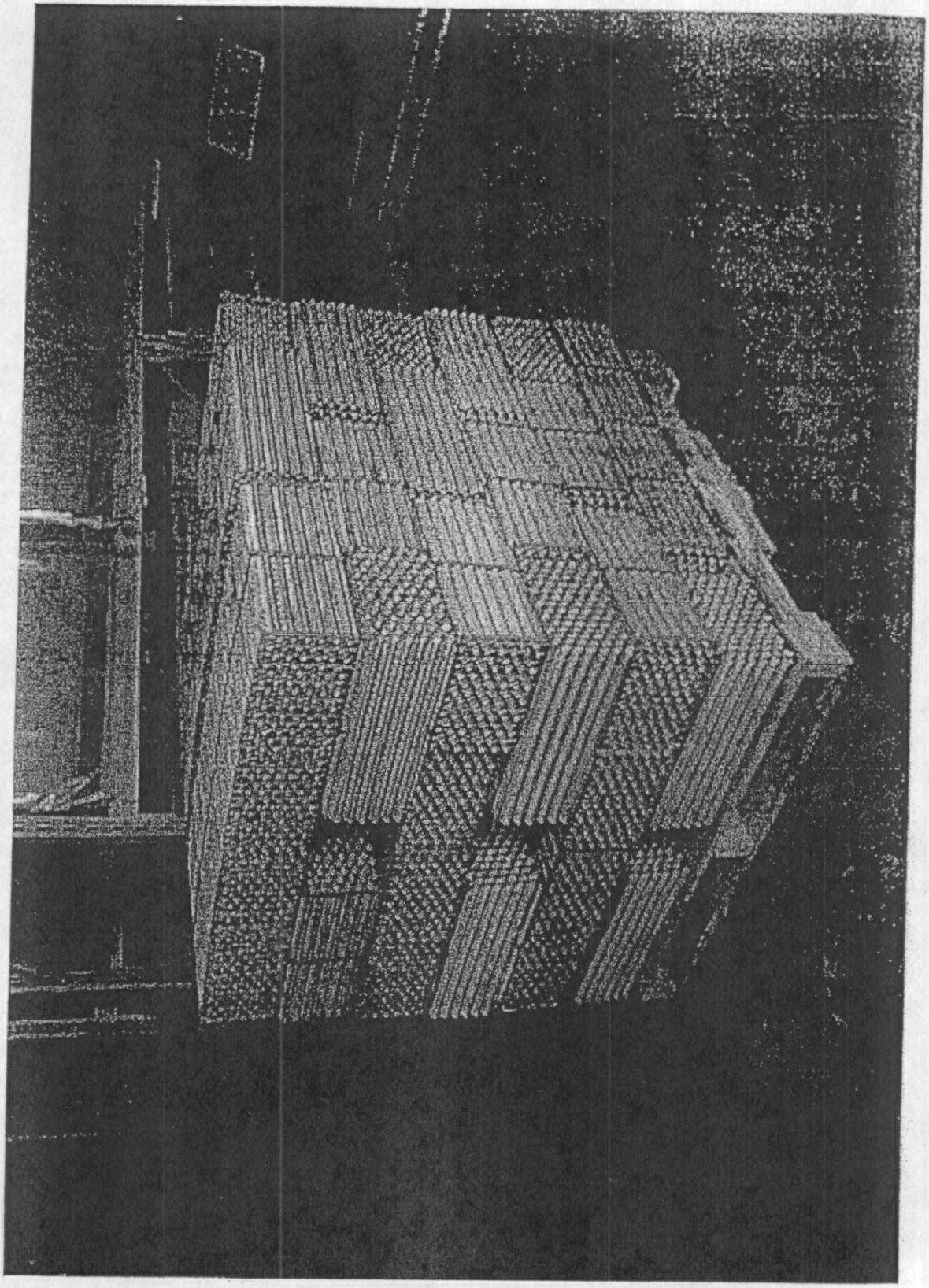
Attachment E U.S. DOT Approval Notification

Attachment F U.S. EPA Position Regarding Variances by Authorized States

# Attachment A

## Photograph, CD Modules®

ATTACHMENT A



CD MODULES[20]

# Attachment B

## TCEQ's Variance Determination for Techemet

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

July 3, 2007

Mr. Edward Albrecht
Techemet LLP
6025 Genoa Red Bluff Road
Houston, TX 77507

Re: Granting of a Variance From the Definition of a Solid Waste for K171 and K172 Catalysts
Solid Waste Registration Number: 87353
Central Registry Reference Number 103939427
Central Registry Customer Number 601690415
Mail Log Number 6613

Dear Mr. Albrecht:

By this letter, the Texas Commission on Environmental Quality (TCEQ) grants a joint variance from the definition of a solid waste pursuant to 30 Texas Administrative Code (TAC) Section 335.19(c) to CDTech and Techemet. The variance is for catalysts manufactured by CDTech referred to as "CD Modules" having the Environmental Protection Agency hazardous waste codes of K171 or K172 that are sent to Techemet's facility located at 6025 Genoa Red Bluff Road in Pasadena, Texas for continued reclamation subsequent to the reclamation which has already occurred at the petroleum refinery that generates the catalysts. The variance commences at the refinery at which the catalysts are first generated and remains valid so long as the following conditions are met:

- The activity of transport and management of the catalysts shall not create a discharge or imminent threat of discharge into or adjacent to the waters of the state, the creation and maintenance of a nuisance, a violation of Section 26.121 of the Texas Water Code, or a violation of any applicable provisions of the air regulations;

- The contractual agreements and obligations between CDTech and the petroleum refineries with which it has licensing agreements and between CDTech and Techemet are accurate, complete, and as presented to the TCEQ in the joint application upon which this variance is based and there is a strict compliance with the terms of those agreements and obligations;

- The catalysts are deactivated prior to leaving the units at the petroleum refinery at which the catalysts are first generated (at a minimum, this shall mean that the catalysts do not exhibit the characteristics of ignitability (D001) or reactivity (D003), shall not be pyrophoric, shall meet all of the standards and criteria for being deactivated found in the Supervisory Operating Manual portion of the joint variance application, and shall meet all U.S. Department of Transportation regulations and conditions for shipment); and

- All records of how the catalysts are recycled at Techemet's facility shall be maintained in an easy to retrieve and easy to copy format.

Please be reminded that, should any substantive changes occur in the storage or management of the catalysts at the Techemet facility, Techemet is required to provide written notification of that fact and detailed information about it in a timely manner to the Industrial and Hazardous Waste Permits Section of the TCEQ and the TCEQ Region 12 Office.

Questions regarding this matter should be directed to Mr. Boultinghouse at the address provided above or by telephone at (512) 239-6865.

Sincerely,

Jacqueline S. Hardee

Jacqueline S. Hardee, P.E., Director
Waste Permits Division
Texas Commission on Environmental Quality

JSH/JKB/fp

cc: Mr. Charles Daigle, Catalyst Recovery Manager, CDTech, Pasadena
Mr. Robert Phelan, Environmental Issues Management, L.L.C, Covington, LA

Attachment C

TCEQ's Variance Determination for DuraTherm

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

May 11, 2005

Mr. Mark L. Byford
EH&S Manager
DuraTherm, Inc.
P.O. Box 58466
Houston, TX 77258-8466

Re: Notification of the Granting of a Variance From the Definition of a Solid Waste
Solid Waste Registration Number: 34814
CN 100890235 /RN 600564165
Mail Log Number 4773

Dear Mr. Byford:

This is to inform you that the Texas Commission on Environmental Quality (TCEQ) is hereby granting DuraTherm's request for a variance from the definition of a solid waste for a material generated at DuraTherm's San Leon, Texas facility. This is the same material described in your December 29, 2004 letter as "molybdenum and nickel bearing material produced by the initial reclamation of spent petroleum catalyst having the Environmental Protection Agency hazardous waste codes K171 and K172".

The TCEQ is granting this variance based on the following factors. First, the information submitted in your letter of December 29, 2004 satisfies the requirements of Title 30 Texas Administrative Code (TAC) Section 335.19(c). Second, there have been no comments received by the TCEQ from the public in response to the announcement made by DuraTherm on March 17, 2005 seeking public comment regarding granting the variance as required under 30 TAC Section 335.21(2) within the thirty day period mandated by 30 TAC Section 335.21(2).

Please note that all communication regarding the granting of this variance as well as notification of any changes that may affect the conditions under which this variance has been granted should be directed to the Industrial and Hazardous Waste Permits Section at the following mailing address:

Texas Commission on Environmental Quality
Waste Permits Division
Industrial and Hazardous Waste Permits Section, MC-130
Post Office Box 13087
Austin, Texas 78711-3087.

Please also note that copies of all correspondence related to the variance should also be sent to the Director of TCEQ Region 12 at the following mailing address:

Texas Commission on Environmental Quality
Region 12 Office
5425 Polk Avenue, Suite H
Houston, Texas 77023-1486

If you have any questions regarding this matter, please contact either Mr. Scott Green or Mr. Jesse Boultinghouse of the Industrial and Hazardous Waste Permits Section at the address given above or by calling (512) 239-6412.

Sincerely.

Wade M. Wheatley, P.E., Director
Waste Permits Division
Texas Commission on Environmental Quality

WMW/JB/ff

**DuraTherm, Inc.**



December 29, 2004

Mr. Glenn Shankle
Executive Director
Texas Commission on Environmental Quality
P.O. Box 13087 (MC 109)
Austin, Texas 78711-3087

Request for Variance from Classification as a Solid Waste

Dear Mr. Shankle:

Pursuant to 30 TAC §§ 335.18(a)(3), 335.19(c), and 335.21, DuraTherm, Inc. ("DuraTherm") requests a variance from classifying as a solid waste the molybdenum and nickel bearing material that it produces from its initial reclamation of the metals contained in spent catalysts from petroleum refining, K171 and K172, but that must be reclaimed further before recovery is completed.

This partially reclaimed metal bearing material is "commodity-like" based upon consideration of the following six factors enumerated in 30 TAC § 335.19(c):

(1) *The degree of processing the material has undergone and the degree of further processing that is required.*

DuraTherm processes the K171 and K172 that it receives from petroleum refineries in the Gulf Coast area, by high temperature thermal treatment in one or both of the two patented thermal desorber units at its San Leon hazardous waste recycling facility, operating under its recently renewed Hazardous Waste Permit No. 50355. By means of this thermal desorption, the organic constituents in the spent catalysts are reduced to less than universal treatment standards (UTS).

Once DuraTherm has removed the VOCs and other organic hydrocarbons and, with them, any ignitability characteristic, the further processing that is required is essentially the same as that applied to the powdered or pelletized molybdenum concentrate typically produced from molybdenum ore as an intermediate step in production of pure molybdenum, or in the production of molybdic oxide or ferromolybdenum used to produce high grade iron and steel alloys. The actual refining process will depend on the ultimate use of the material produced by DuraTherm, but typically it will undergo smelting or other thermal or chemical metal separation processes.



P. O. Box 58466 • Houston, TX 77258-8466 • Tel: (281) 339-1352 • Fax: (281) 339-1351

(2) *The value of the material after it has been reclaimed.*

In December 2004, pure bulk molybdenum metal has been priced on world commodity markets at $30 - $35/lb. Nickel is priced at over $6/lb. With the molybdenum content of the material produced by DuraTherm at 10% - 20% by weight, and the nickel content at approximately 20%, the value of DuraTherm's intermediate product is obviously quite high at today's prices. Assuming an average molybdenum concentration of 15%, one ton of DuraTherm product would yield 300 pounds of molybdenum, worth approximately $10,000. Even if the cost of further reclamation reduces the value to DuraTherm as much as 75%, this still means that the value of the intermediate product produced by DuraTherm would be approximately $2,500/ton.

Therefore, just considering only the value attributable to the molybdenum contained in the material produced by DuraTherm, the millions of dollars of value that is represented by the thousands of tons of spent refinery catalysts that DuraTherm routinely processes each year at its San Leon facility is readily recognizable. Applying similar math to the 20% nickel content of the material adds approximately $600 per ton to the value of the material in DuraTherm's hands.

(3) *The degree to which the reclaimed material is like an analogous raw material.*

High grade molybdenum ores contain only 2% to 3% molybdenum. Once the ore is concentrated (typically by a flotation process at or near the mine), the resulting molybdenum concentrate, usually a fine powder but sometimes pelletized, typically contains 30% - 60% molybdenum. Therefore, the material produced by DuraTherm, with a molybdenum content of 10% - 20%, is more analogous to the molybdenum concentrate that is the usual feedstock for molybdenum smelters and other refining processes than to the much less concentrated ores that represent an earlier stage raw material in the metal production process.

(4) *The extent of which an end market for the reclaimed material is guaranteed.*

A very extensive market exists for molybdenum. In alloy steel, molybdenum acts as a hardening agent and also improves the properties of the alloy at high temperatures. Such alloys are used in making high-speed cutting tools, aircraft parts, and forged automobile parts. The pure metal in the form of thin sheets or wire is used in X-ray tubes, electronic tubes, and electric furnaces because it can withstand high temperatures. Useful compounds of molybdenum include molybdenum disulfide, used as a lubricant; ammonium molybdate, used in chemical analysis for phosphates; and lead molybdate, used as a pigment in ceramic glazes.

Particularly at current world prices, both molybdenum ore (roasted and unroasted) and molybdenum concentrate are themselves widely bought and sold on world markets, with substantial overseas shipments of each, particularly to China.

Therefore, at current and reasonably foreseeable prices, the market for DuraTherm's high molybdenum concentration product is very strong and virtually assured.

(5) *The extent to which the reclaimed material is handled to minimize loss.*

At a current value in DuraTherm's hands of $2,500 - $3,000/ton, DuraTherm would have great incentive to minimize the loss of this material, even if it presented no environmental risk. However, as the agency knows, DuraTherm is a permitted hazardous waste management facility, with many years of experience in the safe handling of material that is much more hazardous, and this intermediate reclaimed product will be handled in a manner consistent with this experience.

Once the organic constituents have been removed from the catalysts by DuraTherm's permitted thermal desorption process, the partially reclaimed material is placed in the same steel roll-off containers and/or "supersacks" used for storage and transportation of hazardous waste. The supersacks are sealed from the elements. The roll-off boxes are covered by tarpaulins to prevent entry of rain and disturbance by wind. While the boxes and supersacks of the material are being stored at DuraTherm's San Leon facility awaiting transport, they will be kept within covered or bermed areas or otherwise managed in a manner consistent with the best management practices specified in DuraTherm's storm water pollution prevention plan, as required by its industrial storm water general permit.

The material will be transported by truck, rail, or vessel to its ultimate reclamation destination in the sealed supersacks and covered roll-off boxes, in essentially the same manner as hazardous waste (absent a manifest). The ultimate reclamation facility will manage the material as required by applicable law and the facility's permits (e.g., air and storm water permits).

(6) *Other relevant factors.*

No hazardous constituent will be just "along for the ride" with the material produced by DuraTherm. All hazardous organic compounds will have been removed by DuraTherm's thermal desorption process. The only remaining potentially hazardous substances are metals (e.g., nickel, vanadium, and arsenic) that are routinely managed safely in the smelting and other metal extraction procedures to which the material will be subjected in order to recover the molybdenum.

By facilitating the recycling of this intermediate reclaimed product, the TCEQ would be helping to conserve the earth's natural resources, reduce the scarring and dangers of open pit molybdenum mining, and avoid the air and water pollution inherent in the mining and processing of molybdenum ores. Further, the TCEQ would avoid the costs, risks, and public objections that come with the use of limited landfill space for disposal of the entire volume of this material as waste.

In conclusion, DuraTherm invites the TCEQ to assist in its environmentally protective and cost beneficial molybdenum reclamation venture and requests the Executive Director to grant this, its request for a variance from classifying as a solid waste the molybdenum and nickel bearing material that it produces by its initial reclamation of the metals contained in the K171

and K172 catalysts that it receives from petroleum refineries. If you have any questions or desire any further information, please call me at 281-339-1352.

Sincerely,

Mark L. Byford

Mark L. Byford, EH&S Manager
DuraTherm, Inc.

cc: Scott Green
Project Manager
Industrial Hazardous Waste Permit Section
Waste Permits Division
Texas Commission on Environmental Quality
P.O. Box 13087 (MC 130)
Austin, Texas 78711-3087

Jackson Battle
Brown McCarroll, L.L.P.
111 Congress Avenue
Suite 1400
Austin, Texas 78701

Leigh Ing, P.E.
Leigh Ing Consulting
1307 Marshall Lane
Austin, TX 78703

# Attachment D

## TCEQ's Variance Determination for CDTECH

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

July 3, 2007

Mr. Charles Daigle, Catalyst Recovery Manager
CDTech
10100 Bay Area Boulevard
Pasadena, TX 77507

Re: Granting of a Variance From the Definition of a Solid Waste for K171 and K172 Catalysts
Mail Log Number 6613

Dear Mr. Daigle:

By this letter, the Texas Commission on Environmental Quality (TCEQ) grants a joint variance from the definition of a solid waste pursuant to 30 Texas Administrative Code (TAC) Section 335.19(c) to CDTech and Techemet. The variance is for catalysts manufactured by CDTech referred to as "CD Modules" having the Environmental Protection Agency hazardous waste codes of K171 or K172 that are sent to Techemet's facility located at 6025 Genoa Red Bluff Road in Pasadena, Texas for continued reclamation subsequent to the reclamation which has already occurred at the petroleum refinery that generates the catalysts. The variance commences at the refinery at which the catalysts are first generated and remains valid so long as the following conditions are met:

- The activity of transport and management of the catalysts shall not create a discharge or imminent threat of discharge into or adjacent to the waters of the state, the creation and maintenance of a nuisance, a violation of Section 26.121 of the Texas Water Code, or a violation of any applicable provisions of the air regulations;

- The contractual agreements and obligations between CDTech and the petroleum refineries with which it has licensing agreements and between CDTech and Techemet are accurate, complete, and as presented to the TCEQ in the joint application upon which this variance is based and there is a strict compliance with the terms of those agreements and obligations;

- The catalysts are deactivated prior to leaving the units at the petroleum refinery at which the catalysts are first generated (at a minimum, this shall mean that the catalysts do not exhibit the characteristics of ignitability (D001) or reactivity (D003), shall not be pyrophoric, shall meet all of the standards and criteria for being deactivated found in the Supervisory Operating Manual portion of the joint variance application, and shall meet all U.S. Department of Transportation regulations and conditions for shipment); and

- All records of how the catalysts are recycled at Techemet's facility shall be maintained in an easy to retrieve and easy to copy format.

Please be reminded that, should any substantive changes occur in the storage or management of the catalysts at the Techemet facility, Techemet is required to provide written notification of that fact and detailed information about it in a timely manner to the Industrial and Hazardous Waste Permits Section of the TCEQ and the TCEQ Region 12 Office.

Questions regarding this matter should be directed to Mr. Boultinghouse at the address provided above or by telephone at (512) 239-6865.

Sincerely,

Jacqueline S. Hardee, P.E., Director
Waste Permits Division
Texas Commission on Environmental Quality

JSH/JKB/fp

cc: Mr. Edward Albrecht, Techemet, Houston,
Mr. Robert Phelan, Environmental Issues Management, L.L.C, Covington, LA

# Attachment E

## U.S. DOT Approval Notification